

What is claimed:

1. A multi service platform, comprising:
 - a layer two switching component;
 - a layer three switching component; and
 - a physical loopback connecting the layer two switching component and the layer three switching component,
wherein layer two capabilities and layer three capabilities are integrated together.
2. The platform of claim 1, in which the physical loopback comprises a fiber jumper cable.
3. The platform of claim 1, further comprising a line card comprising the layer two switching component and the layer three switching component.
4. The platform of claim 3, in which both ends of the loopback terminate on the line card.
5. The platform of claim 3, further comprising at least one additional physical loopback connecting to another layer three switching component on the line card,
wherein redundancy for the layer three functionality is provided on the line card.
6. The platform of claim 3, further comprising at least one additional line card comprising at least one additional layer two switching component and at least one additional layer three switching component,
wherein the at least one additional line card provides redundancy.
7. The platform of claim 6, in which the at least one additional line card comprises at least one additional physical loopback terminating on the at least one additional line card.
8. A network, comprising:
 - a plurality of layer two switches;

at least one platform including a layer two switching component, a layer three switching component and a physical loopback between the layer two switching component and the layer three switching component; and

at least one connection between one of the layer two switches, which communicates with a customer edge device, and the layer two switching component of the platform,

wherein a failure of the connection, which extends to the platform, is protected by layer two network failure restoration.

9. The network of claim 8, in which the physical loopback comprises a fiber jumper cable.

10. The network of claim 8, in which the layer two network switches comprise ATM switches.

11. The network of claim 10, in which the at least one connection comprises a permanent virtual connection (PVC).

12. The network of claim 10, in which the layer two switching component of the platform comprises an ATM switch.

13. The network of claim 8, in which the layer three switching component of the platform comprises an IP router.

14. A method for routing traffic across a layer two network having layer three routing capabilities, comprising:

routing traffic from a customer across the layer two network to a layer two switching component in a platform;

routing traffic from the layer two switching component across a physical loopback to a layer three switching component in the platform;

determining, at the layer three switching component, where to route the traffic;

returning the traffic to the layer two switching component; and
forwarding the traffic to a destination based upon the determined route.

15. The method of claim 14, in which the layer two network comprises an ATM network.

16. The method of claim 14, in which the layer three switching component and the layer two switching component are on a line card.

17. The method of claim 14, in which the layer two switching component of the platform comprises an ATM switch.

18. The method of claim 14, in which the layer three switching component of the platform comprises an IP router.